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(54) EARTHQUAKE-RESISTING REINFORCING  
STRUCTURE AND VISCOELASTIC DAMPER

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To provide earthquake-resisting reinforcing structure effectively absorbing seismic energy with the object of the buildings of medium- and low-rise reinforced concrete construction and a high-rise building mainly and capable of reducing the response of a structure and a compact viscoelastic damper proper to the structure at low cost.

**SOLUTION:** Reinforcing posts 4 are installed along the columns 1 of column-beam frames. A cylinder type viscoelastic damper 3 is mounted into the column-beam frames in the type of a brace through gusset plates 5, and an input to a structure is reduced by the energy absorption of the viscoelastic damper 3. In the viscoelastic damper 3, an internal cylinder 3b using an end section on the reverse side as a fixing end is inserted into an external cylinder 3a employing one end as a fixing end, and a clearance between the external cylinder 3a and the internal cylinder 3b is filled with a

viscoelastic body 3c. The viscoelastic body 4 uses a high molecular material as a raw material, has the hysteresis characteristics of an elliptic loop and a velocity dependence type damping characteristics, and has the large degree of freedom regarding a shape and is molded easily.

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